

CLAIMS

- 1 1. Time-of-flight mass spectrometer, comprising:
2 (a) two cylindrical capacitors each having 254.56° , opposed in such a way that
3 the flight paths of the ions, which consist of circular and linear sections, combine
4 to form a figure of eight, the capacitors supplied with a deflecting potential for the
5 ions; and
6 (b) an electrically conductive housing which encloses the linear flight paths
7 between the cylindrical capacitors, whereby the potential of this housing is
8 different from the mid potential between the capacitors.
- 1 2. Time-of-flight mass spectrometer according to Claim 1 wherein between each
2 cylindrical capacitor and the electrically conductive housing, slit diaphragms are
3 mounted which act as ion-optical slit lenses.
- 1 3. Time-of-flight mass spectrometer according to Claim 1 wherein in each case, in
2 addition to the slit lenses, pairs of corrective electrodes are also mounted.
- 1 4. Time-of-flight mass spectrometer according to one of the Claim 1 wherein a
2 pulser is incorporated which transforms a continuous primary beam from an ion
3 source into a pulsed ion beam following a helical path in the capacitors.